

a first fluid conduit in a plurality of cycles, each cycle beginning with the aspiration of a first air segment and ending with the aspiration of a final air segment, said first and final air segments of each having a volume;

transferring the liquid segments and the air segments of each cycle from said first fluid conduit to a second fluid conduit;

adjusting the volume of the <sup>first</sup> final air segment of each cycle after the final air segment has moved into said <sup>third</sup> second fluid conduit; <sup>wherein</sup>

transferring the liquid segments and the air segments of each cycle from said second fluid conduit to a third fluid conduit; and

adjusting the volume of the first air segment of each cycle after the first air segment has moved into said third fluid conduit wherein the volume of the final air segment is adjusted to equal an optimal volume; and

wherein said volume of the first air segment is adjusted according to a feedback loop.